At the third meeting, August 16, Covarrubias from Mexico, and Metzger from Java were present.

After the discussion of various business matters, the Zone observations, the computations on minor planets, and the reduction of the observations made during the transit of Venus 1874, December 8, Engineer Metzger made from Java different communications on the astronomical and geodetical proceedings at Java. Professor Scheibner spoke on the use of the theory of elliptical functions in the theory of perturbations, and communicated a prize-question concerning this matter by the Tablonowski Society at Leipzig. He also communicated very interesting results of his researches in dioptrics.—Professor Neumayer gave a statement on the regulations and field of labour of the Hydrographical Office at Berlin, and of the Scientific Institutions under its direction, the Observatory at Wilhelmshaven and the Deutsche Seewarte at Hamburg. Professor Winnecke described the new orbit-sweeper of the Strasburg Observatory, and announced the beginning of a review of the nebula. The equipment of the new Observatory at Strasburg is made with the direct intention of activity in this branch of astronomy.—Professor Bruhns remarked, that at the Leipzig Observatory charts for the nebula are made, which are visible in a comet-seeker.—Professor Bakhuyzen communicated his researches on the latitude of Greenwich, and its diminution in the later years.

The election of the New Council concluded the meeting: President, Professor Struve; Vice-President, Professor Bruhns; Secretaries, Professors Schönfeld and Winnecke.

NOTES

THE *Valorous*, which accompanied the two Arctic ships, the *Alert* and the *Discovery*, as far as Disco, with coals and provisions, arrived at Plymouth on Sunday. She has really nothing remarkable to tell, which is so far satisfactory. Severe storms were met with in crossing the Atlantic, but all three vessels seem to have borne themselves well, though the *Alert* and *Discovery* each lost a whale boat, a loss which was made up to them by the *Valorous* before leaving Disco. The *Valorous* was the first to reach Disco, which she did on July 4, the other two not coming up till the 6th. The ships remained together at Disco till the 15th, the two exploring vessels filling up from their consort as much coals and provisions as they could stow away. During their stay at Disco, officers and men seem to have enjoyed themselves and to have been treated with the greatest courtesy and kindness by the Danish officials and the natives. Mr. Kraup Smith, the Inspector of North Greenland, had orders from his Government to pay every attention to the Expedition, and he carried out his instructions most liberally. He provided the Expedition with sixty-four dogs and an Esquimaux. While at Disco the naturalists of the three ships were employed collecting botanical and geological specimens on shore and dredging in and outside the harbour. A very large number of plants were found, some believed to have been previously unknown in this part of Greenland. The *Alert* and *Discovery* having been put into complete trim, the Expedition left Godhavn on July 15, and on the 16th the *Valorous* took leave of her consort ships, after seeing them fairly on their way to their work in the high north. The Danish officials' reports as to the weather are favourable, leading to the belief that the navigation of Melville Bay and northwards will be comparatively easy. It is hoped that suitable winter quarters will be found for the *Discovery* on the north shore of Lady Franklin's Strait, from whence hunting parties will issue. The *Alert* will then press onwards alone to the north, landing depots, building cairns with records at intervals of about sixty miles. The surest way of reaching the Pole, in Captain Nares's opinion, is not to risk failure by pushing forward away from the land. The *Alert* will probably winter in 84° and begin sledge travelling so as to get information of the country, and then in the summer of 1876 will push boldly northwards. The grand achievement will be done by a system of depots and auxiliary sledges, enabling the foremost to be absent about 112 days, and to advance upwards of 500 miles from the ship. The *Discovery*, in the meantime, will go on exploring and advancing slowly. At the British Association on Tuesday, a paper by Mr. C. H. Markham, who accompanied his cousin to Disco in the *Alert*, was read; and Mr. Carpenter, who with Dr. Gwyn Jeffreys sailed in the *Valorous* for dredging purposes, added a few words. He said, when they parted with the *Alert* and *Discovery* they had every reason to believe from the state of the wind and weather that the Expedition would go on favourably. He thought it was more than probable that the *Discovery* was now in her winter quarters, and the *Alert* was somewhere further north. The letters which the ships would deposit would probably reach England before Christmas, and after that it is not likely they would hear anything of them until next summer, or perhaps later. On its way home the *Valorous* struck on a sunken rock to the north of Holsteinberg, but happily came off without serious damage. Temperature, soundings, and dredgings were made by the *Valorous* in its homeward journey, many interesting forms having been obtained. In a series of temperature soundings taken, 33° and a decimal was found to be the lowest. When the *Valorous* parted with the Expedition everybody on board the two ships was in perfect health.

THE annual meeting of the Ray Society was held at Bristol on Friday; Sir Philip Egerton presided. The Report of the Council stated that the arrears in the issue of volumes were at last overcome. The volumes for 1873 and 1874 had been distributed, and much advance had been made in the "Memoir on the Aphides," by Mr. G. B. Buckton, proposed as the volume for 1875. The very beautiful plates drawn and presented to the Society by Mr. Buckton are now with the colourer, and the whole will be sent to the binder probably in November. In addition to Mr. Mivart's monograph on the Tailed Amphibia, and Prof. Westwood's on the Mantidæ, Mr. G. Brady has promised a work on the Copepoda, and it is found that the MSS. and sketches of the late Mr. Hancock are sufficient to complete the long-promised monograph on the British Tunicata. The balance-sheet showed over 214*l.* in hand. The names of Prof. Bentley, Mr. Hudson, Dr. Gwyn Jeffreys, and Mr. Mennell were withdrawn from the Council, and those of Dr. A. Carpenter, Mr. Collinson, Mr. Currey, and Dr. Millar were substituted for them. Sir Philip Egerton was re-elected president, Mr. S. J. A. Salter treasurer, and the Rev. Thomas Wiltshire secretary; and cordial votes of thanks were given to them for their services.

THE Nantes Meeting of the French Association for the Advancement of Science was brought to a close last Thursday. It has been decided with much propriety that next year's meeting will be held at Clermont Ferrand, where the new Observatory of Puy de Dome is sure to prove a great attraction. The Observatory will be then in working order, and everything will be ready for the inspection of visitors. Havre has been chosen as the meeting-place for 1877. This meeting is sure to be a success, Havre being almost to Paris what Brighton is to London. M. Dumas has been appointed a vice-president of the permanent council in room of M. Faye, who has resigned. The accession of M. Dumas in the governing body is sure to infuse new life into the Association. Most of the foreigners present belonged to Oriental nations, being Greeks, Ottomans, or Persians. We hope to give an abstract of the proceedings next week.

THE twelfth congress of the Italian Scientific Associations was opened at Palermo on Aug. 29 by Count Mamiani, in presence of an audience exceeding two thousand persons. Count Mamiani began by thanking the Municipality of Palermo for the hospitable reception it had given brother Italians as well as strangers, and explained that the future Congress will assemble under the new name of the Italian Association for the Promotion of Science. No longer representing a little aristocracy of *savants*,

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it would embrace all Italy. Nothing nowadays can flourish which has not its root in the people. Great individuals have given place to the co-operating multitude, and the sole thing left for the people to reverence is science—the one surviving deity on the deserts of Olympus. In Palermo, the city of the chivalric Normans and the knightly Suabian Frederic, chivalry survives, but its tournaments are philosophical discussions, and its mistress is science, which is the immortal poetry of nature and truth. Count Mamiani then signalised Sicily's services to science, and spoke of what she will yet do for meteorology.

Petermann's *Mittheilungen* for September will contain the following among other papers:—On the Linguistic Divisions of Elsass-Lothringen, with a map coloured to show the districts in which Dutch, German, and mixed Dutch and French are spoken.—Travels in the Republic of Guatemala in 1870, by Dr. G. Bernouilli, concluded from previous numbers.—Remarks on a Map of Western Australia, which will accompany the number.—Under the title of "Bilder aus dem hohen Norden," Lieut. Weyprecht will commence a series of Sketches of Phenomena in the Arctic Regions; the article in the September number dealing with the Aurora and the Ice.

M. Brazza, an ensign in the French navy, and M. Marche, a traveller, who has already made important discoveries on the banks of the Ogové, left Paris last week for Toulon, in order to resume the exploration of Tropical Africa, and to discover the sources of the river just named. They will stay for some time Saint Louis, the chief town of the Senegal settlements, and recruit a number of Laptots chosen from among the negroes engaged under the French colours. The expedition is supported by the Society of Geography, private subscriptions, and a small grant given by the French Government. The principal resource is the sale of objects of natural history, which are so numerous in a country rich in plants, birds, and animals of every description. They are to be sent to M. Bouvier, the well-known naturalist of Paris, and catalogues will from time to time be circulated. The exploration will last for five years.

M. Leverrier has published in the Paris papers a notice intimating that the Observatory will be opened for observations three times a week, from half-past seven, weather permitting. Two large telescopes are placed at the disposal of visitors, who may procure a letter of admission by writing to the Secretary of the Observatory.

The reforms which the French Minister of Public Instruction is preparing for the next University term are so numerous that no holidays will be granted to the *employés* of the Ministry of Public Instruction this year.

The French Government have published in the *Journal Officiel* of August 24 a decree notifying the precautions to be observed by manufacturers of explosives in which dynamite is the base. The precautions, which are numerous, have been most carefully drawn up by a special commission, and are worthy of general attention.

In the Paris International Maritime Exhibition there is a small object deserving of notice. It is a platinum wire placed in a bottle and ignited by electricity from a bichromate battery. It is intended to be immersed in the sea, and the light emanating from it is said to attract an immense number of fishes. Experiments have been tried lately on the coast of the Côtes du Nord department with a fishing-boat, and have proved very satisfactory, on a bank of sardines. The glass must be green or black, otherwise the fish are frightened by the glare and do not follow the submarine light.

The *Civilian* states that Major-Gen. Cameron, R.E., C.B., has been appointed Director of the Ordnance Survey of Great Britain and Ireland.

The Russian expedition to Hissar has resulted in a complete elucidation, from a scientific point of view, of the questions connected with the Hissar and Kuliaba rivers. All the important towns in the country have been visited, astronomical observations have been taken at fourteen places, and the members of the expedition are in a position to draw up a complete map of the country. Moreover, a map of military routes has been draughted and an entomological collection has been made. The Expedition has discovered that the Turkham river, whose very existence was so long doubted by geographers, is one of the most important tributaries to the Amu, and that the Drongate Pass, now called Busgol Kham, fully bears out the formidable accounts of Asiatic travellers.

The additions to the Zoological Society's Gardens during the past week include five Bonnet Monkeys (*Macacus radiatus*) from India; a Yellow Baboon (*Cynocephalus babouin*), and a Sykes's Monkey (*Cercopithecus albigularis*), from W. Africa, presented by Mr. J. B. Tunnard; a Common Marmoset (*Hapale jacchus*) from S. E. Brazil, presented by Mrs. Puente; a Darwin's Pucras (*Pucrasia darwini*) from China; an Indian Cobra (*Naja tripudians*) from India, deposited; and an Axis Deer (*Cervus axis*) born in the Gardens.

SOCIETIES AND ACADEMIES

Paris

Academy of Sciences, August 23.—M. Frémy in the chair. The following papers were read:—Comparison of the theory of Saturn with the observations; Tables of Saturn's motion; by M. Leverrier.—Theorems into which a condition of equality of two rectilinear segments enters, by M. Chasles.—MM. Ch. Galbruner, F. Crôtte, and Lesthevenson, made several communications with regard to Phylloxera.—A note by M. Declat on the pathological use of phenylic acid, and of phenylate of ammonia.—A note by M. de Fonvielle on a new method to determine the path described by a balloon.—On the integration of a system of equations with partial differentials, by M. N. Nicolaïdes.—On the trisection of an angle by aid of the compass, by M. Ed. Lucas.—On the properties of the diameters of wave-surfaces and the physical interpretation of these properties, by M. A. Mannheim.—On a compound of platinum, tin, and oxygen, analogous to Cassius' gold purple (platinostannic oxide of M. Dumas), by MM. B. Delachanal and A. Mermet.—On bankoul oil, by M. E. Heckel.—A reply to M. Gauthier's objections regarding the rôle of carbonic acid in the spontaneous coagulation of blood, by MM. E. Mathieu and V. Urbain.—Note on the last elements at which it is possible to arrive by histological analysis of striated muscles; by M. A. Ronjon.—On the shooting stars of August, 1875, by M. Chapelas.

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